

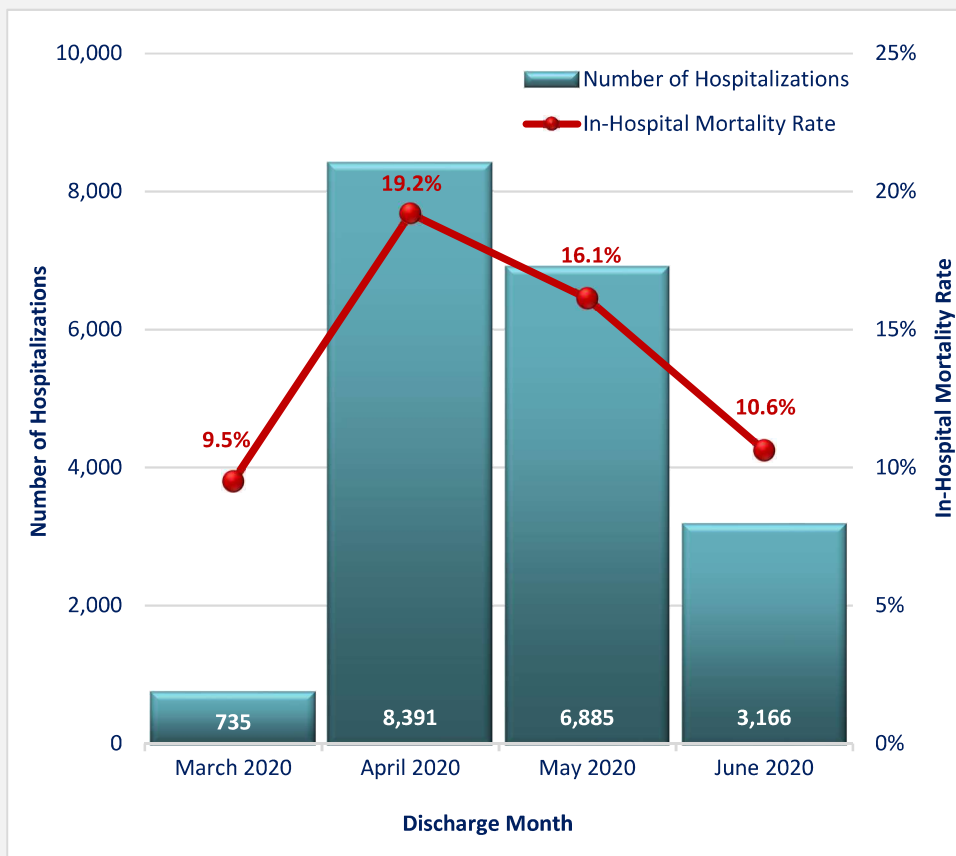


COVID-19 Hospitalizations in Pennsylvania—March to June 2020

This research brief examines COVID-19 hospitalizations for patients of all ages, Pennsylvania residents and non-residents, who were discharged from Pennsylvania's acute care hospitals from March through June 2020. As these hospitalizations occurred during the first four months of the COVID-19 pandemic, the results form a basis for future analysis and comparison as subsequent data becomes available.

- There were **19,177** COVID-19 hospitalizations in Pennsylvania between March and June 2020.
- These patients spent a total of **168,511** days in the hospital. The average length of stay was **8.8** days. **17.4%** of the patients stayed 14 days or longer.
- **15.7%** of the patients required mechanical ventilation.
- **16.3%** of the patients died during their hospitalization.

COVID-19 Hospitalizations, March 2020 – June 2020 Number of Hospitalizations and In-Hospital Mortality Rate by Discharge Month



- The number of hospitalizations was at its highest in April.
- The in-hospital mortality rate peaked in April.
- Both the number of hospitalizations and the in-hospital mortality rates declined from their highest point in April to June.

* This brief was revised to reflect a correction in the hospitalization rate reported on page 2 for the 18-24 years age category.

COVID-19 Hospitalizations, March 2020 – June 2020 by Patient Characteristics

- **Hospitalization rates are higher** for older residents, especially ages 55 and older; male residents; Hispanic residents and Black, non-Hispanic residents; and residents living in high poverty areas (where 25% or more of the population lives in poverty).
- **In-hospital mortality rates are higher** for older patients, especially ages 65 and older; male patients; White, non-Hispanic patients; and patients living in low poverty areas (where less than 10% of the population lives in poverty).
- **Average length of stay is longer** for patients age 55 years to 74 years; male patients; and Black, non-Hispanic patients.
- **Mechanical ventilation rates are higher** for patients age 55 years to 74 years; male patients; and Asian, non-Hispanic and Black, non-Hispanic patients.

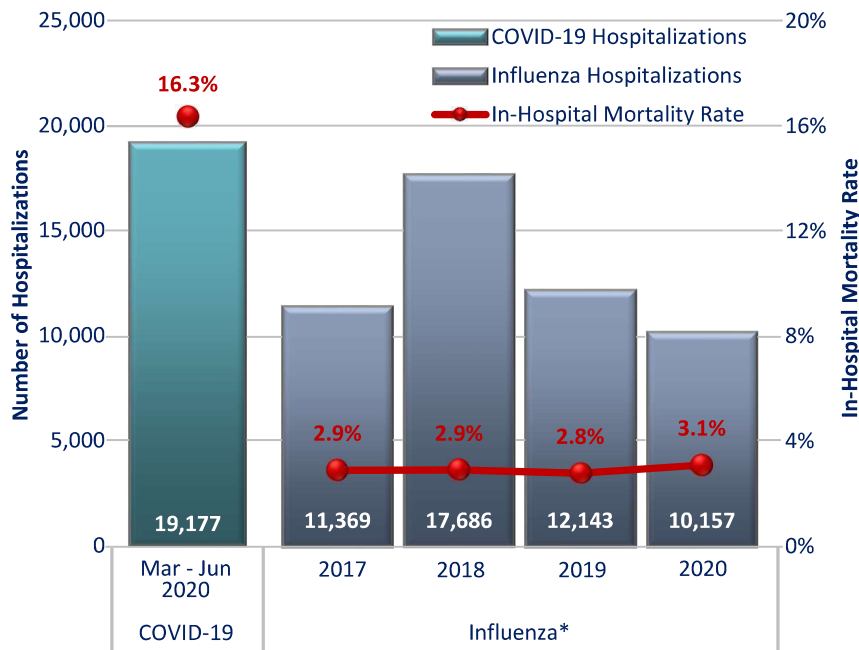
Patient Characteristic		Hospitalization Rate per 10,000 PA Residents	Number of Hospitalizations	In-Hospital Mortality Rate	Average Length of Hospital Stay (in days)	Mechanical Ventilation Rate
Age	Less than 18 years	0.6*	195	NR	6.2*	9.7%*
	18-24 years	2.9*	330	NR	5.2*	7.6%*
	25-34 years	5.4*	956	1.4%*	6.2*	5.6%*
	35-44 years	8.8*	1,384	3.0%*	7.9	10.9%*
	45-54 years	14.3	2,373	8.2%*	8.8	15.6%
	55-64 years	20.8*	3,860	12.3%*	9.8*	19.2%*
	65-74 years	28.9*	4,045	19.7%*	10.1*	22.1%*
	75-84 years	46.8*	3,420	24.8%*	8.8	16.7%
85 years or more	76.6*	2,614	28.2%*	7.3*	6.8%*	
Sex	Female	13.6*	9,144	14.3%*	8.3*	13.0%*
	Male	15.4*	10,033	18.2%*	9.2*	18.1%*
Race and Ethnicity†	Asian, non-Hispanic	11.0*	543	15.7%	8.6	19.7%*
	Black, non-Hispanic	43.1*	6,130	15.3%*	9.4*	17.5%*
	Hispanic	22.6*	2,345	9.7%*	8.0*	14.2%*
	White, non-Hispanic	8.7*	8,801	19.1%*	8.6	14.5%*
Poverty Rate	Less than 10%	10.5*	6,865	17.9%*	8.6	15.4%
	10% to less than 25%	13.9*	7,621	17.0%	8.9	16.3%
	25% or more	37.4*	4,691	13.0%*	8.9	15.1%
Statewide		14.5	19,177	16.3%	8.8	15.7%

NR: Not reported due to low in-hospital mortality volume.

* Statistically significant difference (at $\alpha=0.05$) compared to the rest of the state.

† Low volume categories are not displayed; therefore, row counts do not add to the statewide total.

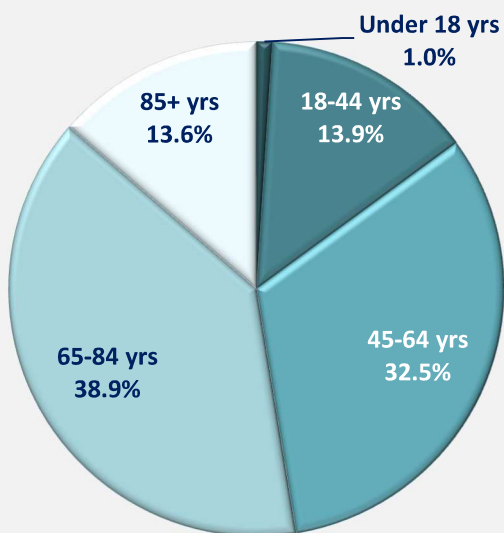
Hospitalizations related to COVID-19 versus Influenza (Flu) Number of Hospitalizations and In-Hospital Mortality Rate



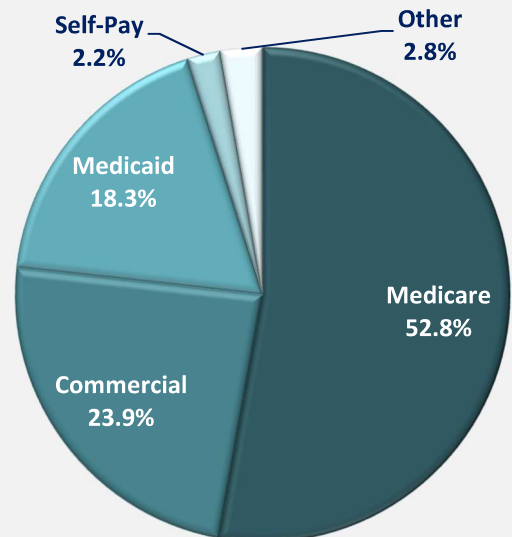
- The number of COVID-19 hospitalizations during the four months from March – June 2020 (19,177) was 49.4% higher than the average annual number of influenza hospital stays from 2017 to 2020 (12,839).
- The in-hospital mortality rate for COVID-19 hospitalizations (16.3%) was 459.7% higher than the average in-hospital mortality rate for influenza hospital stays from 2017 to 2020 (2.9%).

*Annual timeframes for influenza were defined as state fiscal years (July – June). Multiple years were used in this analysis since influenza seasons tend to vary from year to year. On average, 98.7% of influenza hospitalizations in the years 2017 through 2020 occurred during the period from October – May each fiscal year.

COVID-19 Hospitalizations, March 2020 – June 2020 by Patient Age and Payer

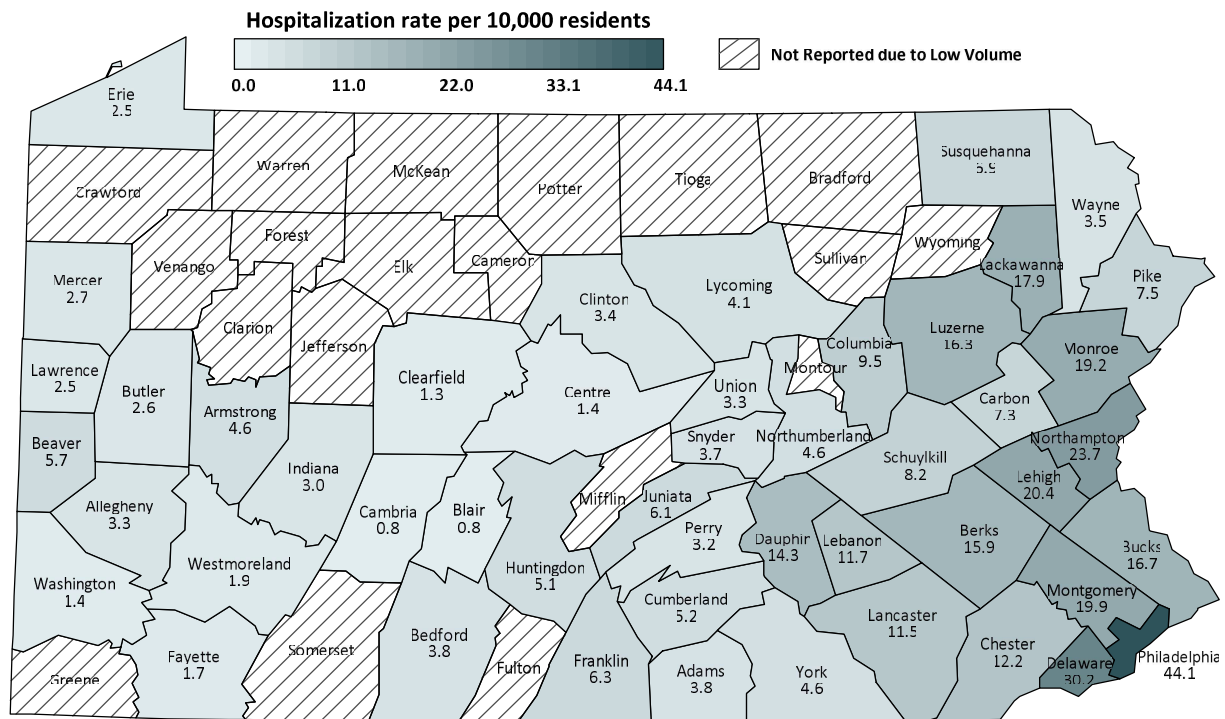


- Over half (52.6%) of COVID-19 hospitalizations were for patients 65 years and older.
- Medicare was the payer for 52.8% of COVID-19 hospitalizations - the largest percentage among the payer groups.



Note: Pie chart percentages may not add to 100% due to rounding.

COVID-19 Hospitalization Rate per 10,000 County Residents, March 2020 – June 2020



Statewide, there were **14.5** COVID-19 hospitalizations per 10,000 Pennsylvania residents from March 2020 to June 2020. The map indicates rates of hospitalization were higher in eastern PA counties than elsewhere across the state during this period. Higher rates for some counties might also reflect larger numbers of residents with high-risk characteristics (e.g., factors related to age, race/ethnicity and poverty levels). County rates were not adjusted for these population differences so that important effects of these patient characteristics were not masked by such adjustment. Population-based rates might change as newer data becomes available.

About PHC4

Created by the PA General Assembly in 1986, the PA Health Care Cost Containment Council (PHC4) is an independent state agency charged with collecting, analyzing and reporting information that can be used to improve the quality and restrain the cost of health care in the state. Today, PHC4 is a recognized national leader in public health care reporting. PHC4 is governed by a board of directors representing business, labor, consumers, health care providers, insurers, health economists and state government.

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Notes about this Brief:

- COVID-19 hospitalizations included all admissions where COVID-19 was the principal diagnosis (primary reason for the hospital stay) or a secondary condition.
- In instances where in-hospital mortality was examined, patients who left against medical advice or were transferred to another acute care hospital were excluded, as were hospitalization records with an invalid discharge status.
- Hospitalization rates reported in this brief were based on Pennsylvania residents only (18,565 hospital stays or 96.8% of all Pennsylvania COVID-19 hospitalizations) and 2019 US Census Bureau data.
- Poverty rates reported in this brief were based on 2019 US Census Bureau estimates at the patient zip code level.

COVID-19 Hospitalizations by County, March 2020 – June 2020

	March 2020 – June 2020	
	Total Number of Hospitalizations	Rate per 10,000 Residents
Statewide	18,565	14.5
Adams	39	3.8
Allegheny	406	3.3
Armstrong	30	4.6
Beaver	94	5.7
Bedford	18	3.8
Berks	671	15.9
Blair	10	0.8
Bradford	NR	NR
Bucks	1,047	16.7
Butler	48	2.6
Cambria	11	0.8
Cameron	NR	NR
Carbon	47	7.3
Centre	23	1.4
Chester	640	12.2
Clarion	NR	NR
Clearfield	10	1.3
Clinton	13	3.4
Columbia	62	9.5
Crawford	NR	NR
Cumberland	132	5.2
Dauphin	397	14.3
Delaware	1,710	30.2
Elk	NR	NR
Erie	67	2.5
Fayette	22	1.7
Forest	NR	NR
Franklin	98	6.3
Fulton	NR	NR
Greene	NR	NR
Huntingdon	23	5.1
Indiana	25	3.0
Jefferson	NR	NR

	March 2020 – June 2020	
	Total Number of Hospitalizations	Rate per 10,000 Residents
Juniata	15	6.1
Lackawanna	376	17.9
Lancaster	626	11.5
Lawrence	21	2.5
Lebanon	166	11.7
Lehigh	755	20.4
Luzerne	518	16.3
Lycoming	47	4.1
McKean	NR	NR
Mercer	30	2.7
Mifflin	NR	NR
Monroe	327	19.2
Montgomery	1,654	19.9
Montour	NR	NR
Northampton	725	23.7
Northumberland	42	4.6
Perry	15	3.2
Philadelphia	6,983	44.1
Pike	42	7.5
Potter	NR	NR
Schuylkill	116	8.2
Snyder	15	3.7
Somerset	NR	NR
Sullivan	NR	NR
Susquehanna	28	6.9
Tioga	NR	NR
Union	15	3.3
Venango	NR	NR
Warren	NR	NR
Washington	29	1.4
Wayne	18	3.5
Westmoreland	68	1.9
Wyoming	NR	NR
York	205	4.6

NR: Not reported due to low volume.